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## Mazeway Disintegration: The Individual's Perception of Socio-Cultural Disorganization

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### Introduction

One winter's day in 1649, a band of warriors from the Petun Indian village of St. Jean, south of the Georgian Bay, went out to intercept an invading war-party of Iroquois. They did not find the enemy. When they returned to the village, four days later, they saw only the ashes of their homes and the charred and mutilated bodies of many of their wives, children, and old men. Not one living soul had escaped death or capture; not one cabin had been spared from the flames. The Petun warriors sat down in the snow, mute and motionless, and no one spoke or moved for half a day; no one even stirred to pursue the Iroquois in order to save the captives or to gain revenge.

Temporary paralysis is one of the modalities of human reaction to disaster. The Petun warriors had in reality lost virtually all the objects (human and material) which were dear to them. But even in less tragic disasters, where damage and casualties are not so complete, and relief speedily arrives, a similar, temporary paralytic response frequently occurs. Beyond reaction to personal injury and loss, the sudden perception of physical destruction of the natural environment, fellow citizens, and material culture with which one is identified, seems to elicit fundamentally the same paralytic response as the Petun warriors showed in the sight of what might be called "total" disaster. It is the purpose of this paper to develop a theory of the individual's identification with his culture which will account for this response.

### The Disaster Syndrome

It is often reported after major physical disasters that many survivors in the impact area are initially found by rescue workers in a state variously described or denoted by such words as "shock," "dazed," "stupor," "apathy," "stunned," "numbed." In such persons, awareness of the extent and severity of damage to self, family, and community, is limited. Efforts at first aid, rescue, and evacuation are often perfunctory and inadequate, and sometimes virtually absent, especially in regard to helping non-relatives and the community at large. Some people simply sit or stand motionless, or wander aimlessly, or "putter about" at inconsequential tasks. Expressions of strong emotion and feeling (pain, grief, fear, anger) are missing or sporadic and inadequate. This shock may persist for minutes or hours.

As organized rescue workers from the filter area and the community begin to arrive in quantity, the pattern changes.

Uninjured survivors emerge somewhat from the cocoon of apathy and take some part in extrication, fire fighting, first aid, evacuation, and communication. Injured persons, however, tend to remain longer in the dazed state. Both groups are relatively docile and obedient, are extremely anxious to hear that others have survived too, are grateful for help and for gestures of concern, and are anxious that others be cared for first. This docile state may persist for hours or days.

After a day or two, both injured and uninjured survivors often show a mild (and perhaps rather superficial) euphoria, marked by thankfulness for survival and by intense public spirit and eagerness to work for the community's welfare; people give up old grudges, ignore barriers of social distance, and merge themselves in a kind of neighborhood revival or revitalization movement. Structures symbolic of community solidarity, such as churches, are cleaned up and put into temporary repair; neighbors help one another in rehabilitation. At the same time, however, considerable complaint is apt to be directed at mass care organizations and at relief and rehabilitation services furnished by persons outside the impact area: the mass care organizations are accused of being cold and indifferent to personal feelings; the necessity of applying for aid is sometimes resented; charges of looting, profiteering, and general inefficiency are voiced. Furthermore, many persons suffer from feelings of depression, from sleeplessness, nightmares, and general "edginess."

These three stages of behavioral reaction to disaster I have called the "disaster syndrome" because they are reported so widely and because they seem to have a coherence of process. The shock state can be called a regression to an extremely disorganized, pseudo-infantile level of adaptive behavior, and the other two stages can be described as a restitution of more adult modalities of action, with a notable emphasis on the individual's identification with the community and its way of life. We do not, however, have adequate statistics on how many persons in any particular disaster could be described as showing any one phase of this syndrome; and because the interviews on which I depend were taken before this syndrome had been delineated as an hypothesized type of prolonged reaction, no single case history in my files shows it clearly in all its stages, except perhaps for one case. Nevertheless, I am confident that inquiry of disaster survivors, pointed to the syndrome's evolution over a two-week period, would show it occurring in full form in many individual instances.<sup>1</sup>

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1. See Anthony F. C. Wallace, *Tornado in Worcester: An Exploratory Study of Individual and Community Behavior in an Extreme Situation* (Washington: National Academy of Sciences—National Research Council, Publication 392, Disaster Study No. 3, 1956).

### Cultural Loss and Mourning

In view of the difficulty of documenting the occurrence of the full syndrome, let us consider for the moment only the first two stages, which have been observed in sequence in the same individuals (shock and docility). It is interesting to ask what, specifically, it is that so "shocks" the individual that he is at first immobilized and then docilized. Physical injury is not necessary in its production: uninjured persons display it as well as the injured, and many severely injured accident victims often do not display the second (docile) stage at all. The loss of near relatives or close personal friends is not a necessary factor: it is shown in those with injured or dead relatives and in those whose friends and relatives escaped injury. Loss of personal property, is not a necessary condition: it is displayed on occasions, like the plane crash at Flagler, Colorado, where there was no damage or even threat to bystanders' homes, businesses, or other major property. But all persons displaying the disaster syndrome have seen a part of their community destroyed and a part of their culture rendered or revealed as inadequate.

Furthermore, it is curious that all three stages taken together have (to this observer's eyes at least) a similarity in pattern to the mourning process as it occurs in at least some persons in some cultures: an initial stage of stunned disbelief, inability to express emotion, random movement; a stage of passivity, dependence, acceptance of sympathy and help from family and friends; and finally a stage of joining with the community in burying the dead and of taking up a new life more or less free of disabling grief over the deceased.

### Cultural Crises and Revitalization Movements

There is a type of social movement, precipitated not by physical disaster but by socio-economic pressures, some of whose aspects have a similarity to the disaster-syndrome. In many societies, after a period of declining welfare (the decline being induced by domination by a foreign power, economic hardships, the increasing obsolescence of certain cultural devices, and perhaps by other factors difficult to specify or measure), a social crisis is reached in which many people feel acutely uncomfortable, and there may be overt symptoms of widespread personal and social disorganization (such as an increasing incidence of alcoholism, of venality in public officials, of delinquencies of various kinds). In such sick societies, it not infrequently happens that religious prophets arise. Such prophets generally have an ecstatic vision or revelation. In this revelation, a divine being appears, who promises aid and protection if certain injunctions are followed, and who presents an unfavorable analysis of the existing characterological and cultural pattern. It is thereupon recommended that the society be revitalized, by the revival of ancient ways, by the importation or invention of new ways, or (usually) by a syncretism of both ancient and new fangled elements. Following the vision or visions, the prophet is personally rejuvenated, and he begins to preach and proselytize. A movement develops which, as it institutionalizes, frequently effects massive reforms. An aura of euphoria, of brotherly love, of altruistic endeavor usually surrounds the movement during its early phases, although

it may quickly sour into witch-hunting and militant defensiveness. It is notable, in the doctrines of these movements, that invariably there is one major problem, both intellectual and emotional, to be solved: the problem of identification. Shall the prophet and his followers identify with what they conceive to be a traditional way or some new or foreign way; shall they identify themselves with their own present native leaders or with new or foreign leaders? Until this problem of group identification has been solved by selection and compromise, orderly social life and individual comfort are alike impossible. Its actual solution is attended by a dramatic release of energy and by a sense of well-being.

The cultural crisis, then, appears to imply a collapse of cultural identification, with attendant depression and deterioration of behavior; the crisis is resolved by a re-affirmation of identification with *some* definable cultural system.<sup>2</sup>

### A Theory of Cultural Identification

It is the thesis of this paper that in major physical disasters many persons will suffer "shock" and the subsequent characteristics of the disaster syndrome, partly or wholly as a result of the perception that *a part of their culture is ineffective or has been rendered inoperative, and that the person reacts (unrealistically it may be) to this perception as if a beloved object were dead*. All survivors perceive cultural damage. Many survivors perceive also that they themselves, family, friends, and personal property have been injured, and these perceptions too call for the reactive behavior, so that the etiology in many individual cases will include not merely cultural loss, but also loss of beloved persons and valued property. But for a great many persons, I believe, the emotional impact of the perception of cultural damage is as "shocking" as, and for some is more shocking than, private loss; and conversely, many persons will suffer any degree of private loss, even death of self and family, before permitting loss of identification with their culture.

The word "identification" has suffered from almost as many definitions as the word "culture." I should like to postpone definition, therefore, until I have laid out a theoretical structure which does not depend entirely on the use of either term. Let us begin with a couple of analogies. They are liable to various qualifications, some of which I shall state, and which will be apparent both to psychologists and culturologists. One analogy is between non-material culture and "the way" a laboratory animal learns to run a maze in order to satisfy a want, like hunger. The other analogy is between material culture, natural environment, and persons and the maze itself. Human beings can be described as organisms whose peculiarity it is to construct and modify, slowly and laboriously, over centuries, very complicated sets of mazes for themselves and their posterity, with elaborate inter-connecting doors and pathways; and also to construct complex rules for interaction and even mutual aid in operating the maze, as "the way" to satisfy their multifarious wants. Both kinds of maze-runners—men and laboratory animals—learn "the way" in response to cues presented by

2. See A. F. C. Wallace, "Revitalization Movements," *American Anthropologist*, 58 (1956): 264-281.

the *Gestalten* of successive positions in their respective types of maze. Both kinds of maze-runner are able to remember "the way" apart from the maze itself. And, I suspect, in both kinds of maze-runner, there is a tendency for both the maze itself, or at least parts of it, and the way it is run, to become objects of wanting. In man, certainly, various positions in the maze and various instrumental responses to these positions, which have no biological satisfiers in them become satisfying, and men will (provided certain minimal biologic wants do not become critical) work very hard merely to be able to sit (literally and metaphorically) in a biologically arid corner of the maze. Man, in other words, falls in love with his maze and his way of running it because they are associated with every satisfaction he derives from life, and, indeed, with the maintenance of life itself. The maze-way is "loved" whereas the "rewards" are merely enjoyed.

At this point I should like to make some of the qualifications I suggested before. Cultural mazes are much more complex than laboratory ones, and no doubt the extrapolation of discoveries about how rats learn and unlearn "the way" in their simple mazes must be gingerly applied to human affairs. Human beings are also bigger-brained, and, I trust, more complex intellectually and emotionally than rats. In man at least there is considerable variation among individuals in "the way" the maze is run, probably more so than in rats, and correspondingly, in how the maze is conceived to exist. Furthermore, different persons come into contact with different parts of "the" maze common to their group. Human beings, however, are loth to admit that they do not all run the same maze in the same way (i.e., they do not like to recognize that the same cue elicits a different response from different people). Some humans can see only two "ways" of responding to the cues: the right way and the wrong (or "deviant") way. (Military folk were more sophisticated: there was the right way, the wrong way, and the army way). Furthermore, people are always tinkering with the maze: opening a door here, digging a tunnel there, changing the rules for what to do when. . . . The maze analogy therefore does not imply any severe cultural determinism: the maze can be and is run in many different ways in the same community, and both maze and way are furthermore always being changed.

Man, in addition, has the capacity—which is implied in the fore-going remarks—to perceive not only the maze but also the way it is run, as if that way were an external object. The way itself can be remembered, analyzed, described verbally, and reified into something with a name. The maze itself as something physical—nature, material, and people—can be cathected in such a way that the mere perception of these objects is satisfying, and their mere absence, or presence in damaged form—can set in motion responses of anxiety. The way itself, however, can be cathected too, as if it were an object, and the conviction that *the way* has been forgotten or abandoned, or that it has somehow changed and betrayed one, can also arouse anxiety.

The nature of the emotional relationship of the individual both to the maze and to the way, and *their* inter-relationship, is determined I suspect by a process of generalization (some forms of which are labelled "transference," "displacement," "sublimation," and "symbolization," I believe, in psychoana-

lytic writing) that begins in infancy when the maze is the limited circuit of the mother's body. I suggest that, whether consciously or no, the maze itself remains for the adult as a complex final extension of the original "maze" (the mother), and of course of intermediate extensions, too, and that the maze-way of the adult (his culture) retains similarly some at least of the emotional meanings of the infant's original maze-way. The individual's attitude toward his maze-way should theoretically pass through as complex an evolution as does his attitude toward a parent (or any other class of objects), so that in the adult he should have actually many attitudes, varying in level of awareness, ranging from "mature" love of country to querulous complaint, and susceptible to internal contradictions and ambivalences. Individuals should also differ as much among each other in their relationship to their maze-ways as they do in their relationship to other objects. Insofar as the way does become reified by the individual, it becomes virtually indistinguishable from the maze itself, having become a sort of autochthonous system of cues. (The concepts of super-ego and ego-ideal come to mind here.) Under "normal" circumstances, however, this underlying relationship between the individual and his maze and his way does not so much obtrude itself as provide a relatively secure foundation for more intricate and more conscious behaviors.

To summarize, then, this formulation, which combines elements of culture, learning, and psychoanalytic theory: it is proposed that we regard physical objects external to the individual's perceptive apparatus, including natural objects, elements of material culture, and human bodies, as constituting a "maze," which presents the individual with cues. This maze is for the adult infinitely more complex than the mazes run by laboratory rats, and it has various characteristics, such as mobility, changeability, and inconsistencies; furthermore, it can be mapped as if it were a group of a great many component, but also elaborate, mazes. The infant's "maze" is much more limited, centering in the mother, whom the child learns *about* before he learns *from*. As the maze elaborates for the child, it retains for him nevertheless the affective significance of the mother, and of other early maze objects, of which it is in a sense merely an extension. The individual's behavior in running the maze in order to obtain satisfactions is the learning of a *way* (systems of action-sequences), and to the extent that the way of using the same maze is similar among many persons, the anthropologist can denote the modalities of individual ways as elements of culture or national character. These ways, furthermore, can in man be abstracted, analyzed, verbally described, and reified, and be presented as cues by persons, by writing, and so forth. The perception of the maze itself, or parts of it, and of the way as a reified abstraction, constantly maintains in the individual, to a greater or lesser degree, a sort of conditioned satisfaction, which derives both from developmental associations and from current reinforcements.

Now the individual's way is a system of behavior which articulates very neatly, and preponderantly but not perfectly to his satisfaction, with the cues presented by the maze about him. His *way* and the maze itself, in other words, are complementary functions, even though his way may not be the

same as that of his neighbor. When the individual has reified his way, furthermore, he considers that it is part of the maze itself (and hence shared by others), and responds to it as if it were an external cue, so that for him maze and way are identified. In this sense, therefore, I am using the phrase, "the individual's identification with his culture."

### The Disruption of Cultural Identification

The identification of the individual with his culture can be disrupted under various conditions. One condition of disruption is sudden physical destruction of the maze itself, or of a part of it. Another condition of disruption is the introduction of systematic changes in the maze by substitution rather than destruction, such that the individual is no longer able to employ his way in obtaining rewards. In the former case, the individual experiences a shock comparable to sudden and drastic bereavement, which temporarily interferes with his capacity to act with insight or to carry out such elements of his way as the remaining portions of the maze permit. His reactive depression is apparently disproportionate to the "real" situation: in other words, in a maze large enough for most visible (from a given point) portions to be destroyed or damaged without the whole maze actually being destroyed the destruction of part results in a reaction as if the whole maze were gone. The impact, furthermore, precipitates a regression to a very early, infantile, and primitive way, and the restitution of more mature learned ways should come about as he discovers, to his great joy that the maze has not in fact been entirely destroyed after all.

In the case of the individual faced by a changing maze, there is first of all a considerable reluctance ("drag") to changing the old way, because of its symbolic satisfying value. As the old way, however, leads to less and less reward, and as frustrations and disappointments accumulate, there are set in motion various regressive tendencies, which conflict with the established way and are inappropriate to the existing maze. The individual can act to reduce his discomfort by several means: by learning a new way to derive satisfaction from the new maze; by encapsulating the regressive strivings in a fantasy system; and by reifying to himself his current way and maze, regarding a major portion of it as dead, and selecting (from either traditional or foreign regions, or both) part of the existing maze-way as vital, meanwhile mourning the abandoned (or abandoning) portion.

A major qualification, however, must be made here. If the individual has learned a way to use destroyed or rapidly changing mazes as a special type of maze itself, with its own system of cues and rewards, he is able to act in maze-destruction or maze-way-inconsistency situations with less shock, in the one case, and less tendency to regress, in the other, than the untrained individual.<sup>3</sup>

### Implications for Disaster Control

Assuming for the moment that the foregoing considerations are valid, certain corollaries can be deduced for application

to disaster control planning. An obvious one, and one intuitively recognized in practice, is the value of indoctrination and training in reducing emotional shock, and in increasing efficiency in the carrying out of verbally defined tasks. The person who is trained so as to view maze-destruction situations simply as mazes of a different kind, which present recognizable cues which he has a way of running, and which lead to rewards of one sort or another, particularly rewards of social approval and esteem, ought to experience far less shock than the person who is not so trained. Training of combat troops by exposing them to "infiltration courses," and the like, and the expectation of behavioral differences between "green" and "veteran" units, illustrate this principle. Similarly, Schneider's paper on "Typhoons on Yap" in this issue of *Human Organization* indicates the extent to which chronic disaster may be purged of its shock functions by phrasing it in terms of familiar cultural processes. Two further corollaries should follow: If the *specific* cues in a "real" disaster are to evoke the response called for, the training process must be carefully designed so that the individual can generalize without difficulty; and the nature of the reward should be such that it adequately replaces the loss anticipated from the sight of destruction. In regard to the latter point, it should theoretically be more effective to couch disaster training suggestions (such as Civil Defense popular instructions) in terms of "you *ought* to do thus and so for your community as well as yourself" than in terms of "take it or leave it: if you want to survive personally, send 25 cents for booklet X." In the former case, it is being suggested that the individual *can* lose his maze-way, but that if he does thus and so, no matter what happens, "somebody" will be appreciative. In the latter case, there is no mention of the danger of loss of the maze-way, and the issue is reduced to the level of accident safety warnings.

It would seem also reasonable to infer from the theoretical outline that therapy for "cases" of disaster syndrome should be based on "tender loving care," on reassurances that the maze-way is not in fact completely destroyed, on demonstration that it (or a visible substitute) does still work, and on permitting people as much as is possible to remain in the area to repair and to "make-do" with the remains. While evacuation may be dictated by other needs, it would seem that in itself evacuation is a kind of second disaster which intensifies the disruption of the individual's identifications. Furthermore, evacuation interferes with the survivor's learning to regard the destruction situation as a runnable maze. Evacuees should, other things being equal, display more severe and more prolonged symptoms of emotional trauma than non-evacuees.

Still further, the sooner the isolation period is ended, the shorter should be the duration of the disaster syndrome, since the appearance of rescue and relief workers is in itself a visible evidence of part of the maze-way still being in existence, and of the love and concern of surviving persons.

### Testing the Theory

The foregoing broad theoretical formulations were stimulated largely by examination of field interviews with disaster survivors and by reading historical data concerning revitaliza-

3. For a later elaboration of the mazeway concept, see A. F. C. Wallace, "Mazeway Resynthesis," *Transactions of the New York Academy of Sciences*, Ser. 2, 18 (1956): 626-638.

tion movements. They have interest as explanations of phenomena hitherto not regarded as being necessarily related. I have also felt diffident in using, as an anthropologist, some features of Hullian learning theory. It would seem, however, that a number of specific testable hypotheses can be derived from these formulations, some requiring laboratory experiment and others appropriate field observations.

The general theory of the maze-way can, I think, be subjected to laboratory test, both with human subjects and at least some species of laboratory animals. One might, for instance, infer that human beings who have been trained to do some task which leads to significant emotional reward, will display a decline in efficiency of performance if certain physical circumstances which are not material to the task, but which have been regularly present during its learning, are removed. Numerous modifications of this design suggest themselves: the use of laboratory animals in such situations; comparing effects of evacuation and non-evacuation procedures; the differential effect of various ways, speeds, and degrees of "removing" parts of the maze; the effect of different learning experiences and associations; and so on. Possibly small-group experiments might be designed to test similar hypotheses. For instance, one might hypothesize that a group performing a team task in a complex technological context should experience a period of morale dissolution and individual regression to pre-group norms following the experimenter's manipulation of the context so as to make the way inappropriate to the changed maze; there should be observ-

able a stage of "cultural crisis," a moment of insight by someone into the nature of the defect in the maze-way, an emotional rejection of some elements of the old (or new) maze and a positive identification with others, leading to a minor euphoria. Groups could be varied in such matters as personality type and experience or lack of training in what to do in maze-way inconsistency situations; the maze-context could be subjected to measurable different degrees of distortion; and so on. In regard to field observation, it would be desirable to obtain much more information about people who do and people who do not suffer from the disaster syndrome, looking particularly for the role of training in determining reaction, as well as to other conditions possibly associated with differences in reaction. It should be possible to verify or disprove, on a description level, my impression from casual reading that the syndrome can occur in any society.

Such research, in addition to being of value in the understanding of human behavior in extreme situations, should also contribute to the bridging of the gap between laboratory-grounded learning theory and what anthropologists, sociologists, social psychologists, and psychiatrists know, in different terms, about such matters as the development of personality, socialization, the taking of roles, culture change, and the nature of morale. It is intriguing to me, at least, as one who has worked chiefly in field and library, to consider the possibility of integrating field and laboratory research in attack on theoretical problems in anthropology.

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